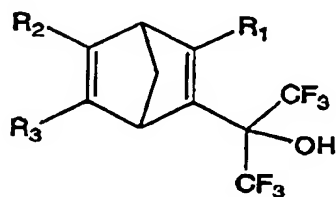


WHAT IS CLAIMED IS:

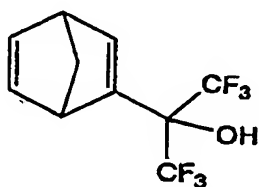
1. A fluorine-containing cyclic compound represented by the formula 1:



(1)

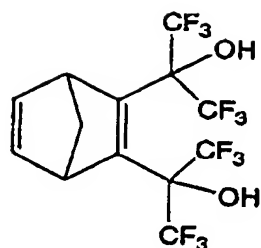
- 5 wherein each of R₁, R₂ and R₃ independently represents a hydrogen, alkyl group, fluorine, fluoroalkyl group or hexafluorocarbonol group, wherein at least one of the hexafluorocarbonol groups may partly or totally be protected with a protecting group, and wherein the protecting group is (a) a straight-chain, branched or
10 cyclic hydrocarbon group having a carbon atom number of 1-25 or (b) an aromatic hydrocarbon group and optionally contains a fluorine atom, oxygen atom, nitrogen atom or carbonyl bond.

2. A fluorine-containing cyclic compound represented by the formula
15 2.



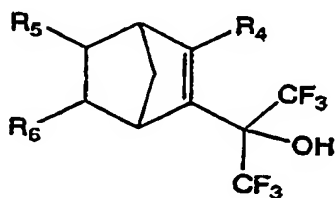
(2)

3. A fluorine-containing cyclic compound represented by the formula
3.

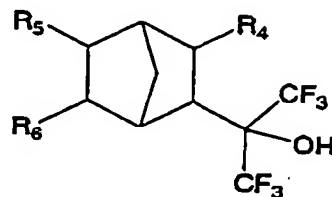


(3)

4. A fluorine-containing cyclic compound derived from the
 fluorine-containing cyclic compound according to claim 1 and represented
 5 by the formula 4 or 5:



(4)



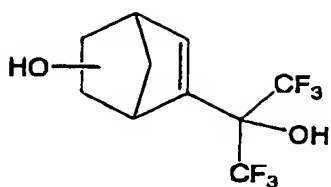
(5)

- wherein at least one of R_4 , R_5 and R_6 represents a hydroxyl group,
 and the remaining group of R_4 , R_5 and R_6 other than the hydroxyl group
 represents a hydrogen, alkyl group, fluorine, fluoroalkyl group, or
 10 hexafluorocarbon group,

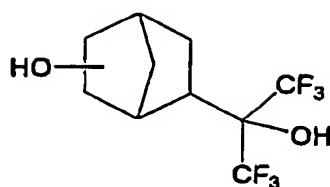
wherein at least one of the hexafluorocarbon groups of the
 formula 4 or 5 may partly or totally be protected with a protecting group,
 and

- wherein the protecting group is (a) a straight-chain, branched or
 15 cyclic hydrocarbon group having a carbon atom number of 1-25 or (b) an
 aromatic hydrocarbon group and optionally contains a fluorine atom,
 oxygen atom, nitrogen atom or carbonyl bond.

5. A fluorine-containing cyclic compound represented by the formula 6
 20 or 7.

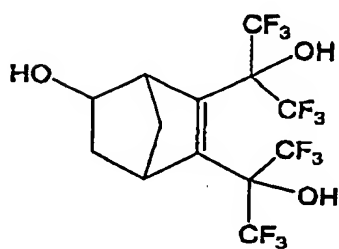


(6)

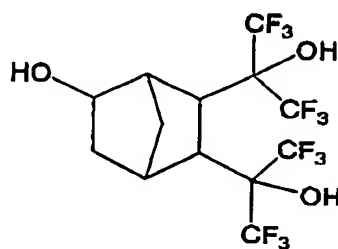


(7)

6. A fluorine-containing cyclic compound represented by the formula 8 or 9.



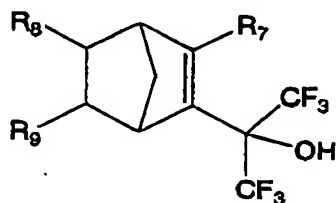
(8)



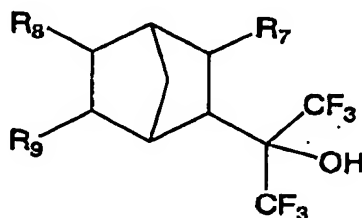
(9)

5

7. A fluorine-containing polymerizable monomer derived from the fluorine-containing cyclic compound according to claim 4 and represented by the formula 10 or 11:



(10)



(11)

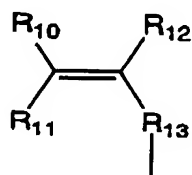
10

wherein one of R_7 , R_8 and R_9 in the formula 10 or 11 is a polymerizable group, and the remaining group of R_7 , R_8 and R_9 other than the polymerizable group represents a hydrogen, alkyl group, fluorine, fluoroalkyl group, or hexafluorocarbon group,

wherein at least one of the hexafluorocarbinol groups of the formula 10 or 11 may partly or totally be protected with a protecting group,

5 wherein the protecting group is (a) a straight-chain, branched or cyclic hydrocarbon group having a carbon atom number of 1-20 or (b) an aromatic hydrocarbon group and optionally contains a fluorine atom, oxygen atom, nitrogen atom or carbonyl bond, and

wherein the polymerizable group is represented by the formula 12:



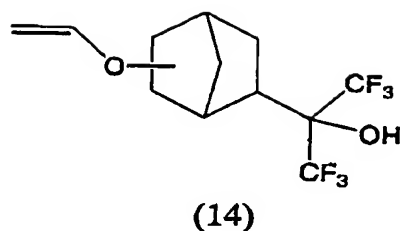
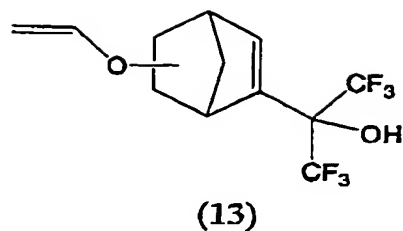
(12)

10 wherein each of R_{10} to R_{12} independently represents a hydrogen atom, fluorine atom, or a straight-chain, branched or cyclic alkyl or fluoroalkyl group having a carbon atom number of 1-25, and

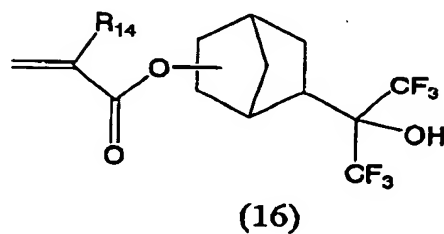
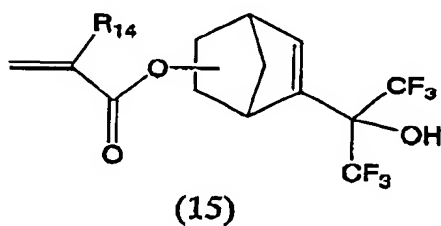
15 wherein R_{13} represents a single bond, a methylene group, a straight-chain, branched or cyclic fluoroalkylene group having a carbon atom number of 2-20, an oxygen atom, a sulfur atom, $-(\text{C}=\text{O})\text{O}-$, or a dialkylsilylene group.

8. A fluorine-containing polymerizable monomer according to claim 7, which is an acrylic ester, methacrylic ester, α -trifluoromethylacrylic ester, 20 vinyl ether, or allyl ether.

9. A fluorine-containing polymerizable monomer represented by the formula 13 or 14.



10. A fluorine-containing polymerizable monomer represented by the formula 15 or 16:

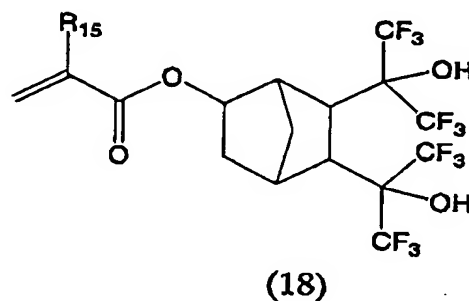
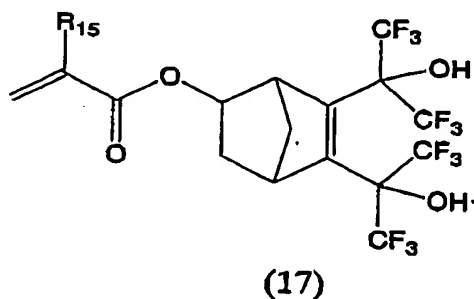


5

wherein R_{14} of the formula 15 or 16 represents a hydrogen, methyl group or trifluoromethyl group.

11. A fluorine-containing polymerizable monomer represented by the formula 17 or 18:

10



wherein R_{15} of the formula 17 or 18 represents a hydrogen, methyl group or trifluoromethyl group.

12. A fluorine-containing cyclic compound according to claim 1,
wherein at least one of the hexafluorocarbonol groups of the formula 1 is
partly or totally protected with an acid-labile protecting group.
- 5 13. A fluorine-containing polymer prepared by a polymerization or
copolymerization using the fluorine-containing cyclic compound according
to claim 1.
- 10 14. A resist composition comprising a fluorine-containing polymer
according to claim 13.
- 15 15. A process for making a resist pattern, comprising the sequential
steps of:
- 15 (a) applying a resist composition according to claim 14 to a
supporting member to form a photosensitive layer on the supporting
member;
- (b) exposing the photosensitive layer to a light through a masking
pattern to form a first precursory layer;
- (c) heating the first precursory layer into a second precursory layer;
- 20 and
- (d) developing the second precursory layer into the resist pattern.